

Application Serial No. 9/269,485
Reply to Office Action of November 12, 2003

PATENT
Docket: CU-1867

Amendments To The Claims
(In The Revised Format)

The listing of claims presented below will replace all prior versions, and listings, of claims in the application.

Listing of claims:

1-9. (cancelled)

10. (currently amended) A ~~system for the~~ peer-to-peer coordination system of distributed programs, services and data by using application programs in a network of computers where coordination servers (CoKe) are running which serve local software systems (LSYS), where shared objects are used as communication objects to exchange messages and transactions are used to realized communication, said communication objects being uniquely identified by object identification numbers (OID), and only processes processing a reference to a communication object are granted access to it via the corresponding local coordination server, with the local software systems being at least extended by functions for the control of transactions, for the creation, reading and writing of communication objects, and for the creation and supervision of uniquely identified processes, and with the communication objects being administrated by means of replication strategies, wherein

all coordination servers ~~are~~ have identical ~~regarding their~~ basic functionality for distributed object, transaction and process management, and taken together, form a global operating system, so that the network of computers operates like a single global super computer where the addition of new processes and sites is dynamic,

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at least some of the objects are updateable objects having a non-resettable logical time stamp and capable of storing data, wherein the updateable objects are coordinated by an optimistic concurrency control without utilizing explicit locks on the objects and further wherein the data of the updateable object is writeable on distributed peer nodes, the

functions provided for the extension of the local software systems provide a transactional blocking read of the updateable object and the processes are granted access to passed communication objects where different consistency models are supported for an updateable object, and

distribution strategies are provided for the administration of communication objects, with the application programs not depending on said distribution strategies, and which distribution strategies are selectable at least with respect to the recoverability or non-recoverability of communication objects and processes.

11. (previously presented) A system according to Claim 10, wherein when choosing the respective distribution strategy, a basic strategy is selected in combination with additional, optional strategy flags.

12. (previously presented) A system according to Claim 11, wherein the local software systems can be started by the corresponding coordination server.

13. (previously presented) A system according to claim 12, wherein communication objects, to which no locally running process possesses a reference any more, are automatically cleared by the corresponding coordination server or can be explicitly freed.

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14. (previously presented) A system according to claim 13, wherein heterogeneous transactions or subtransactions are distributed to different sites (X,Y,Z) via the coordination servers which, taken together, behave as a global operating system.
15. (previously presented) A system according to claim 14, wherein a non-blocking transactional read is provided for updateable objects.
16. (previously presented) A system according to claim 14, wherein the writing into an object, the starting of a subtransaction, the distribution of part of a transaction to another site, the specification of a compensation action or of an on-commitment action are provided as transactional predicate.
17. (previously presented) A system according to claim 16, wherein an on-commitment action is started as a computation if it is sure that a transaction will commit.
18. (previously presented) A system according to claim 17, wherein among the functions for transactions a programmable backtracking of transactional operations, e.g. reading or writing of communication objects, is provided to be able to dynamically repair faults or failures in the transactions.